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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/760,883 | 01/17/2001 | Hiroyuki Shibata | 23.1093 | 4981 |

21171 7590 07/28/2004

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EXAMINER

KOVALICK, VINCENT E

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2673

DATE MAILED: 07/28/2004

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/760,883

Applicant(s)

SHIBATA ET AL.

Examiner

Vincent E Kovalick

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-3, 5-7, 9-11, 13-16, 18-20, 22-24, 26-29 and 31-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6, 9 and 40 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7, 10, 11, 13-16, 18-20, 22-24, 26-29, 31-39 and 41-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Applicant's Amendment dated March 12, 2004 in response to USPTO Office Action dated December 12, 2003.

In that new prior art has been introduced in the rejection of claims 1, 10, 14, 19, 23, 27, 34, 35, 36, 38 and 39, Applicant's remarks relative to said claims is rendered moot.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 3, 7, 11, 16, 20, 24, 29 and 48-52 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for claims other than 3, 7, 11, 16, 20, 24, 29 and 48-52, does not reasonably provide enablement for claims 3, 7, 11, 16, 20, 24, 29 and 48-52. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Claims 3, 7, 11, 16, 20, 24, 29 and 48-52 teach the limitation for the driving method for a plasma display wherein the frequency of the clock signal used to drive the display panel continuously varies within a range of plus or minus 1 percent of a reference frequency. The enablement of this limitation is not supported in the specification.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 10, 14-15, 19, 23, 27-28, 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami (USP 6,037,917).

Relative to claims 1, 10, 14, 19, 23, 27, 34-39 Kawakami **teaches** a plasma display system (col. 2, lines 29-67, col. 3, lines 1-67 and col. 4, lines 1-67); Kawakami further **teaches** a driving method for a plasma display apparatus, wherein a frequency of a clock signal, used to drive a display panel, is continuously varied, and said display panel is driven with said frequency varying clock signal (col. 5, lines 34-37 and lines 60-67).

The difference between the teachings of the instant invention and that of the Kawakami reference is that the instant invention is directed to the reduction of peak values of the display noise by varying the display panel driving frequency wherein the Kawakami reference provides a plasma display capable of reducing the light intensity level variation when a video signal at a different field frequency is inputted.

It would have been obvious to a person of ordinary skill in the art at the time of the invention that the limitations as set forth in claims 1, 10, 14, 19, 23, 27 and 34-39 are addressed in the teachings of Kawakami.

Regarding claims 2, 15 and 28, Kawakami **teaches** the driving method for a display apparatus wherein the clock signal used to drive said display panel is a source clock signal of said display apparatus (col. 5, lines 47-67 and col. 6, lines 1-18).

6. Claims 5, 13, 18, 22, 26 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami as applied to claims 1, 6, 10, 14, 19 and 23 respectively in item 5 hereinabove, and further in view of Tanaka et al (USP 6,130,420). Regarding claims 5, 9, 13, 18, 22, 26 and 31, Kawakami **does not teach** said display apparatus wherein during a quiescent period, said clock generating circuit performs control of said clock used for driving said display panel. Kawakami teaches a plasma display system.

Tanaka et al. **teaches** an image sensing apparatus and a method for driving said apparatus (col. 1, lines 63-67, col. 2; lines 1-67 and col. 3, lines 1-18). Tanaka et al. further **teaches** said display apparatus wherein during a quiescent period, said clock generating circuit performs control of said clock used for driving said display panel (col. 2, lines 31-67 and col. 3, lines 1-2).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kawakami, the feature as taught by Tanaka et al. in order to permit the clock generating circuit to exercise control of the clock used for driving the display panel only during a quiescent period so as to not interfere with other functions being performed relative to the display panel during the non-quiescent periods.

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7. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami as applied to claim 27 in item 5 hereinabove, and further in view of Nakata et al. (USP 5,206,729).

Relative to claim 32, Kawakami **does not teach** said driving method for a display apparatus wherein said driving of the display panel reduces peak values of noise emitted by the display panel.

Kawakami teaches a plasma display system.

Nakata et al. **teaches** an image switching apparatus for producing special video effects (col. 3, lines 41-68 and col. 4, lines 1-34); Nakata et al. further **teaches** said driving method for a display apparatus wherein said driving of the display panel reduces peak values of noise emitted by the display panel (col. 9, lines 6-11 and Fig. 5).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kawakami the feature as taught by Nakata et al. in order to provide the means to control image flicker (col. 9, lines 3-5, Nakata et al.).

8. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami as applied to claim 27 in item 5 hereinabove, and further in view of Cooper (USP 4,305,091).

Regarding claim 33, Kawakami **does not teach** said driving method for a display apparatus wherein said driving of the display panel spreads out frequencies of noise emitted by the display panel.

Kawakami teaches a plasma display system.

Cooper **teaches** an electronic noise reducing apparatus and method (col. 1, lines 5-33);

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Cooper further **teaches teach** said driving method for a display apparatus wherein said driving of the display panel spreads out frequencies of noise emitted by the display panel (col. 9, lines 17-35).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kawakami the feature as taught by Cooper in order to minimize the noise emitted by the display panel.

9. Claims 41, 42, 43, 44, 45, 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami as applied to claims 10, 19, 23, 34, 35 and 38, respectively (with both claims 43 and 47 being applied to claim 23) in item 5 hereinabove, and further in view of Jagdt (DE 4112672A1)

Regarding claims 41-47, Kawakami **does not teach** a display apparatus wherein the clock signal time switched between said at least two frequencies in accordance with the time conditions is periodically time switched between said at least two frequencies to reduce the peak nose output of the dipay panel

Kawakami teaches a plasma display system.

Jugdt **teaches** a display apparatus wherein the clock signal time switched between said at least two frequencies in accordance with the time conditions is periodically time switched between said at least two frequencies to reduce the peak nose output of the display panel (Abstract).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kawakami the feature as taught by Jagdt in order to reduce the noise output of the display panel.

Allowable Subject Matter

10. Claims 6, 6/9 and 6/40 are allowed.

11. The following is an examiner's statement of reasons for allowance:

Relative to claim 6, the major difference between the teachings of the prior art of record (USP 6,037,917, Kawakami and USP 6,130,420, Tanaka et al.) and that of the instant invention is that said prior art of record **does not** teach a driving method for a plasma display apparatus having a display panel, wherein a peak noise output of the display panel is reduced by switching a clock signal, used to drive the display panel, between at least two frequencies in accordance with time conditions.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

| | | |
|------------------|-----------|-----------------|
| U. S. Patent No. | 5,917,461 | Sakami et al. |
| U. S. Patent No. | 5,748,165 | Kubota et al. |
| U. S. Patent No. | 3,889,225 | McKenzie et al. |

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

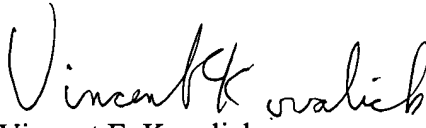
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Responses

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E Kovalick whose telephone number is 703 306-3020. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703 305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Vincent E. Kovalick
July 22, 2004


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